

DOCKET NO.: DMCI-0026  
Application No.: 09/462,576  
Office Action Dated: August 11, 2003

PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116

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This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) A method for producing vanillin in cultured *Vanilla planifolia*, which comprises:

a) providing a tissue culture of said *Vanilla planifolia*; and  
b) supplementing the culture with a compound selected from the group consisting of malic acid at a concentration of at least about 0.01% 3% by weight of the culture medium, 1mM 3,4-dihydroxybenzaldehyde, ~~a combination of malic acid and 3,4-dihydroxybenzaldehyde, and 30 µg/ml glycosylated lysozyme, in an amount effective to result in the vanillin production in the cultured *Vanilla planifolia*.~~

2. (Original) The method of claim 1, wherein the tissue culture is an embryo culture.

3. (Canceled).

4. (Currently Amended) A method for producing vanillin in cultured *Vanilla planifolia*, which comprises:

a) providing a tissue culture of said *Vanilla planifolia*, The method of claim 3, wherein the culture is subjected  
b) subjecting the culture to mechanical shear stress for 21 days[,]; and  
followed by addition of the  
c) adding malic acid at a concentration of between about 1% and 3%  
by weight of the culture medium.

5. (Currently Amended) The method of claim 4, wherein the culture is supplemented with 3,4-dihydroxybenzaldehyde at a concentration of between about 0.1 and 5 mM.

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6. (Currently Amended) The method of claim 3 4, wherein the culture is further supplemented with about 0.01 to about 5% by weight of a compound selected from the group consisting of succinic acid, oxaloacetic acid, citric acid and pyruvic acid.

7. (Currently Amended) The method of claim 1 4, wherein the culture is supplemented with about 1 to about 100 30  $\mu$ g/ml of glycosylated lysozyme.

8 – 30. (Canceled)

31. (Currently Amended) A cell culture comprising *Vanilla planifolia* cells in a culture medium supplemented with an elicitor of vanillin synthesis selected from the group consisting of malic acid, 3,4-dihydroxybenzaldehyde, a combination of malic acid and 3,4-dihydroxybenzaldehyde, and glycosylated lysozyme, wherein, after about 15 days in culture exposure to the elicitor, the cell culture produces at least twice as much vanillin as a cell culture after 15 days in culture under equivalent conditions, in a culture medium which was not supplemented with the elicitor.

32. (Currently Amended) The cell culture of claim 31, which, at after 15 days in culture exposure to the elicitor, produces at least ten times as much vanillin as a cell culture after 15 days in culture under equivalent conditions, in a culture medium which was not supplemented with the elicitor.

33. (Original) The cell culture of claim 31, wherein the cells are embryo cells.

34. (Original) The cell culture of claim 31, wherein the cells are root cells.

35 – 40. (Canceled)

41. (Withdrawn) A cell culture medium for the production of vanillin in cultured *Vanilla planifolia* cells comprising a cell culture medium supplemented with a compound selected from the group consisting of malic acid at a concentration of at least about 0.01% by weight

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of the culture medium, 3,4-dihydroxybenzaldehyde, a combination of malic acid and 3,4-dihydroxybenzaldehyde, and glycosylated lysozyme, in an amount effective to result in the vanillin production in the cultured *Vanilla planifolia*.

42. (Withdrawn) The cell culture medium of claim 41 which provides an at least about two-fold or more increase in the production of vanillin compared to a culture medium which is not supplemented.

43. (Withdrawn) The cell culture medium of claim 41 which provides an at least about ten-fold or more increase in the production of vanillin compared to a culture medium which is not supplemented.

44. (New) The cell culture of claim 31, which, ~~at after 7 days in culture exposure to the elictor~~, produces at least ten times as much vanillin as a cell culture after 7 days in culture under equivalent conditions, in a culture medium which was not supplemented with the elictor.